

What is claimed is:

1. A method for decreasing the amount of mSREBP in a cell characterized by an elevated level of mSREBP comprising
5 contacting the cell with an agent that specifically inhibits *de novo* synthesis of ceramide in the cell, thereby decreasing the amount of mSREBP in the cell.
- 10 2. A method for decreasing cholesterol synthesis in a cell characterized by an elevated level of mSREBP comprising contacting the cell with an agent that specifically inhibits *de novo* synthesis of ceramide in the cell, thereby decreasing cholesterol synthesis in the cell.
- 15 3. A method for decreasing fatty acid synthesis in a cell characterized by an elevated level of mSREBP comprising contacting the cell with an agent that specifically inhibits *de novo* synthesis of ceramide in the cell, thereby decreasing fatty acid synthesis in the cell.
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4. A method for decreasing triglyceride synthesis in a cell characterized by an elevated level of mSREBP comprising contacting the cell with an agent that specifically inhibits *de novo* synthesis of ceramide in the cell, thereby
25 decreasing triglyceride synthesis in the cell.
5. The method of claim 1, 2, 3 or 4, wherein the cell is a human cell.
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6. The method of claim 1, 2, 3 or 4, wherein the cell is a hepatocyte.
7. The method of claim 1, 2, 3 or 4, wherein the cell is an adipocyte.

8. The method of claim 1, 2, 3 or 4, wherein the agent specifically inhibits the activity of an enzyme which catalyzes part of the *de novo* ceramide pathway.

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9. The method of claim 8, wherein the enzyme is serine-palmitoyl transferase or ceramide synthase.

10. The method of claim 1, 2, 3 or 4, wherein the agent
10 inhibits the expression of an enzyme which catalyzes part of the *de novo* ceramide pathway.

11. The method of claim 10, wherein the enzyme is serine-palmitoyl transferase or ceramide synthase.

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12. The method of claim 1, 2, 3 or 4, wherein the agent is selected from the group consisting of (a) myriocin; (b) cycloserine; (c) Fumonisin B1; (d) PPMP; (e) compound D609; (f) methylthiodihydroceramide; (g) propanolol; and (h)
20 resvaratrol.

13. A method for increasing the amount of mSREBP in a cell comprising contacting the cell with an agent that specifically increases *de novo* synthesis of ceramide in the
25 cell, thereby increasing the amount of mSREBP in the cell.

14. The method of claim 13, wherein the cell is a human cell.

15. The method of claim 13, wherein the cell is a hepatocyte.

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16. The method of claim 13, wherein the cell is an adipocyte.

17. A method for treating a subject afflicted with a disorder characterized by an elevated level of mSREBP in the

subject's cells comprising administering to the subject a therapeutically effective amount of an agent that specifically inhibits *de novo* synthesis of ceramide in the subject's cells, thereby treating the subject.

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18. A method for treating a subject afflicted with a disorder characterized by increased ceramide synthesis in the subject's cells comprising administering to the subject a therapeutically effective amount of an agent that specifically inhibits *de novo* synthesis of ceramide in the subject's cells, thereby treating the subject.

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19. A method for treating a subject afflicted with an elevated cholesterol level comprising administering to the subject a therapeutically effective amount of an agent that specifically inhibits *de novo* synthesis of ceramide in the subject's cells, thereby treating the subject.

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20. A method for treating a subject afflicted with an elevated fatty acid level comprising administering to the subject a therapeutically effective amount of an agent that specifically inhibits *de novo* synthesis of ceramide in the subject's cells, thereby treating the subject.

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25 21. A method for treating a subject afflicted with an elevated triglyceride level comprising administering to the subject a therapeutically effective amount of an agent that specifically inhibits *de novo* synthesis of ceramide in the subject's cells, thereby treating the subject.

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22. The method of claim 17, 18, 19, 20 or 21, wherein the subject is a human.

23. The method of claim 17 or 18, wherein the disorder is a lipid disorder.

24. The method of claim 23, wherein the lipid disorder is
5 selected from the group consisting of (a) hypercholesterolemia; (b) hypertriglyceridemia; (c) combined familial hyperlipidemia; (d) obesity; (e) type I diabetes; (f) type II diabetes; (g) alcoholism; (h) metabolic syndrome; (i) syndrome X; (j) hypertension; and
10 (k) cardiovascular disease.

25. The method of claims 17 or 18, wherein the disorder is selected from the group consisting of (a) hereditary sensory neuropathy; (b) Niemann Pick Disease Type A; and
15 (c) Niemann Pick Disease Type B.

26. The method of claim 17, 18, 19, 20 or 21, wherein the agent is selected from the group consisting of (a) myriocin; (b) cycloserine; (c) Fumonisin B1; (d) PPMP; (e) compound D609;
20 (f) methylthiodihydroceramide; (g) propanolol; and (h) resvaratrol.

27. A method for inhibiting in a subject the onset of a disorder characterized by an elevated level of mSREBP in
25 the subject's cells comprising administering to the subject a prophylactically effective amount of an agent that specifically inhibits *de novo* synthesis of ceramide in the subject's cells, thereby inhibiting the onset of the disorder.

30 28. A method for inhibiting in a subject the onset of a disorder characterized by increased ceramide synthesis in the subject's cells comprising administering to the subject a prophylactically effective amount of an agent that

specifically inhibits *de novo* synthesis of ceramide in the subject's cells, thereby inhibiting the onset of the disorder.

5 29. A method for inhibiting in a subject the onset of a disorder characterized by an elevated cholesterol level in the subject comprising administering to the subject a prophylactically effective amount of an agent that specifically inhibits *de novo* synthesis of ceramide in the
10 subject's cells, thereby inhibiting the onset of the disorder.

15 30. A method for inhibiting in a subject the onset of a disorder characterized by an elevated fatty acid level in the subject comprising administering to the subject a prophylactically effective amount of an agent that specifically inhibits *de novo* synthesis of ceramide in the subject's cells, thereby inhibiting the onset of the disorder.
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25 31. A method for inhibiting in a subject the onset of a disorder characterized by an elevated triglyceride level in the subject comprising administering to the subject a prophylactically effective amount of an agent that specifically inhibits *de novo* synthesis of ceramide in the subject's cells, thereby inhibiting the onset of the disorder.

30 32. The method of claim 27, 28, 29, 30 or 31, wherein the subject is a human.

33. The method of claim 27 or 28, wherein the disorder is a primary lipid disorder.

34. The method of claim 33, wherein the primary lipid disorder is selected from the group consisting of (a) hypercholesterolemia; (b) hypertriglyceridemia; (c) combined familial hyperlipidemia; (d) obesity; (e) type I diabetes; (f) type II diabetes; (g) alcoholism; (h) metabolic syndrome; (i) syndrome X; (j) hypertension; and (k) cardiovascular disease.

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35. The method of claims 27 or 28, wherein the disorder is selected from the group consisting of (a) hereditary sensory neuropathy; (b) Niemann Pick Disease Type A; and (c) Niemann Pick Disease Type B.

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36. The method of claim 27, 28, 29, 30 or 31, wherein the agent is selected from the group consisting of (a) myriocin; (b) cycloserine; (c) Fumonisin B1; (d) PPMP; (e) compound D609; (f) methylthiodihydroceramide; (g) propanolol; and (h) resvaratrol.

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20 37. A method for increasing the amount of mSREBP in the cells of a non-human subject comprising administering to the subject an effective amount of an agent that specifically increases *de novo* synthesis of ceramide in the subject's cells, thereby increasing the amount of mSREBP in the subject's cells.

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38. An article of manufacture comprising a packaging material having therein an agent that specifically inhibits *de novo* synthesis of ceramide in a cell, and a label indicating a use for the agent in treating or inhibiting the onset of a disorder in a subject, which disorder is characterized by an elevated level of mSREBP in the subject's cells.

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39. An article of manufacture comprising a packaging material having therein an agent that specifically inhibits *de novo* synthesis of ceramide in a cell, and a label indicating a use for treating or inhibiting the onset of an elevated cholesterol level in a subject.

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40. An article of manufacture comprising a packaging material having therein an agent that specifically inhibits *de novo* synthesis of ceramide in a cell, and a label indicating a use for treating or inhibiting the onset of an elevated fatty acid level in a subject.

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41. An article of manufacture comprising a packaging material having therein an agent that specifically inhibits *de novo* synthesis of ceramide in a cell, and a label indicating a use for treating or inhibiting the onset of an elevated triglyceride level in a subject.

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42. A method for determining whether an agent decreases *de novo* synthesis of ceramide in a cell, which method comprises the steps of:

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(a) contacting the cell with the agent under suitable conditions;

(b) determining the amount of *de novo* synthesis of ceramide in the cell after a suitable period of time; and

(c) comparing the amount of *de novo* synthesis of ceramide determined in step (b) with the amount of *de novo* synthesis of ceramide in a cell in the absence of the agent, a lower amount of *de novo* synthesis of ceramide in the cell contacted with the agent indicating that the agent decreases the amount of *de novo* synthesis of ceramide in the cell.

43. A method for determining whether an agent increases *de novo* synthesis of ceramide in a cell, which method comprises the steps of:

5 (a) contacting the cell with the agent under suitable conditions;

10 (b) determining the amount of *de novo* synthesis of ceramide in the cell after a suitable period of time; and

15 (c) comparing the amount of *de novo* synthesis of ceramide determined in step (b) with the amount of *de novo* synthesis of ceramide in a cell in the absence of the agent, a greater amount of *de novo* synthesis of ceramide in the cell contacted with the agent indicating that the agent increases the amount of *de novo* synthesis of ceramide in the cell.